0050375 4578250

FIG.1

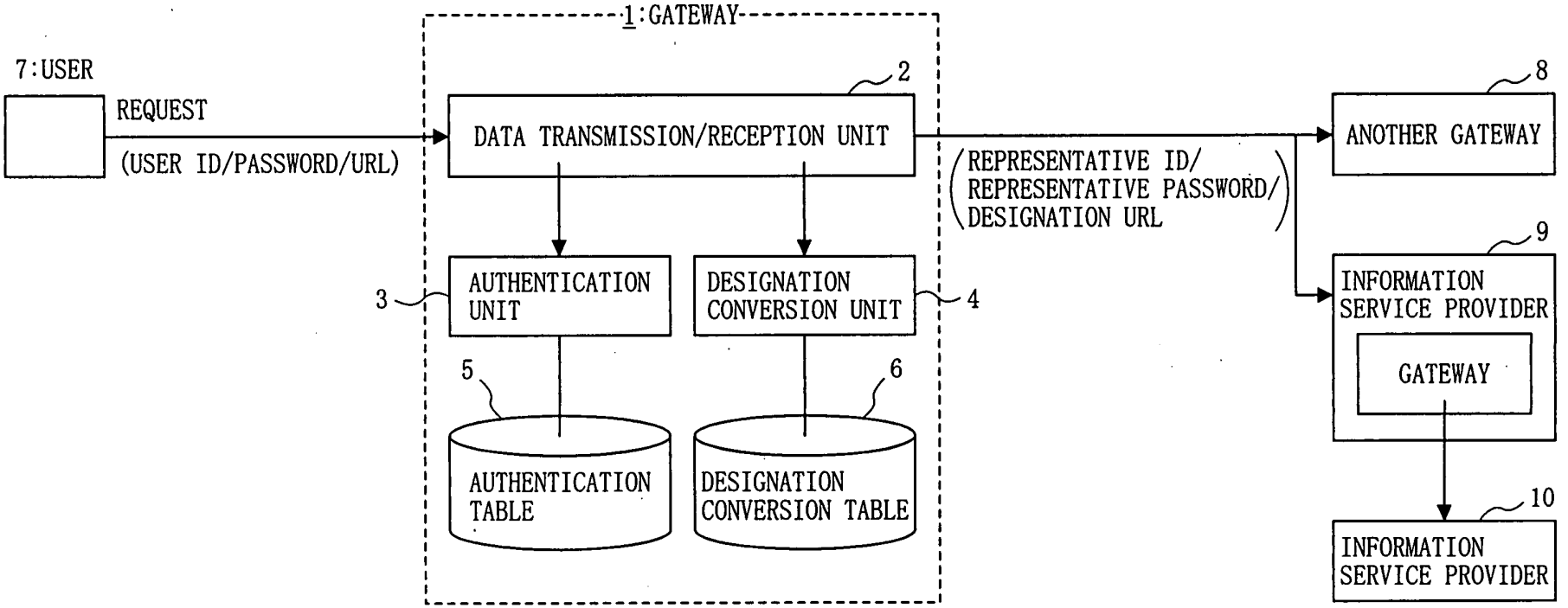


FIG.2

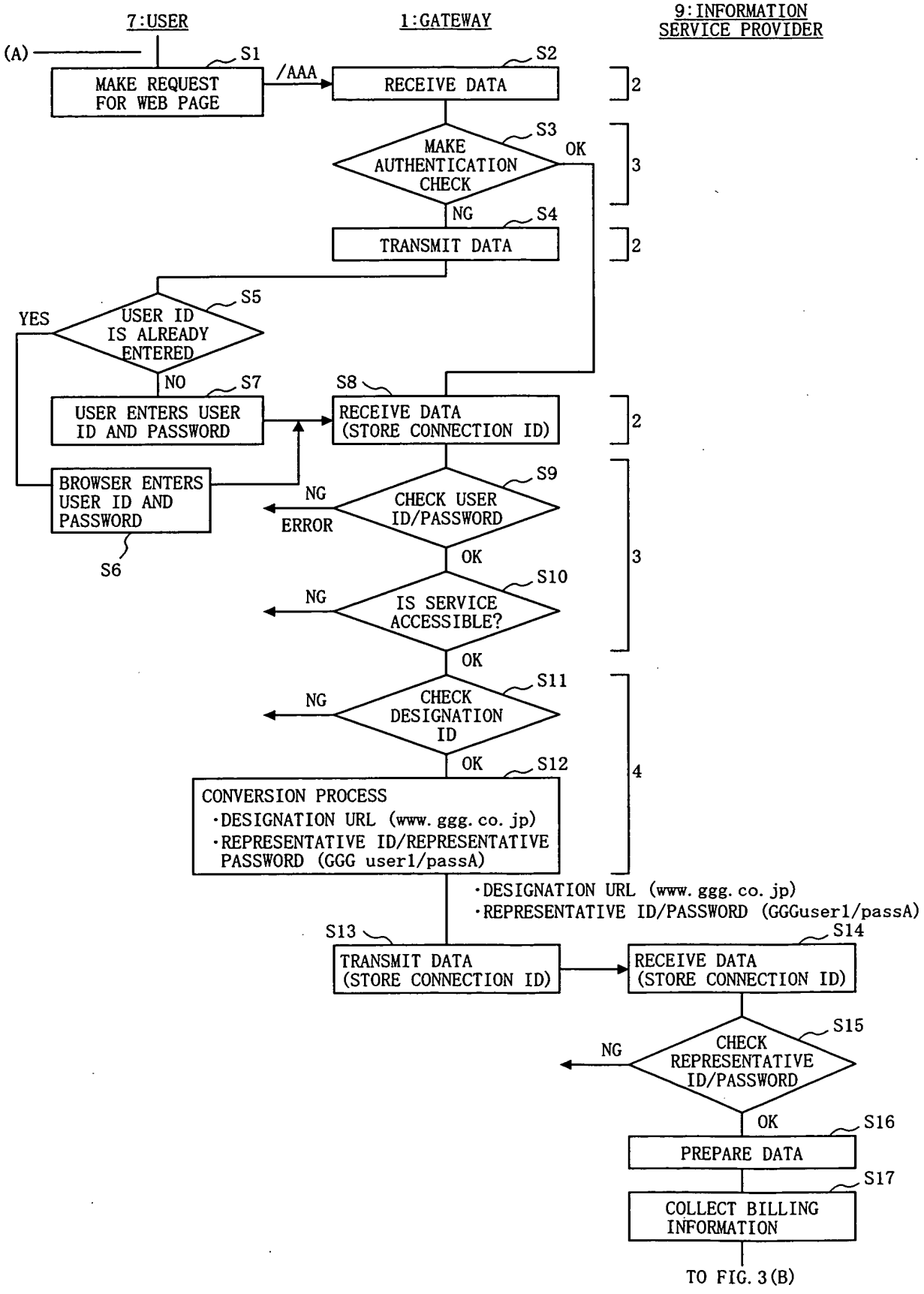

7:USER
1:GATEWAY
9:INFORMATION SERVICE PROVIDER
(A)
S1
MAKE REQUEST FOR WEB PAGE
/AAA
S2
RECEIVE DATA
2
S3
MAKE AUTHENTICATION CHECK
OK
3
NG
S4
TRANSMIT DATA
2
S5
YES
USER ID IS ALREADY ENTERED
NO
S7
USER ENTERS USER ID AND PASSWORD
S8
RECEIVE DATA (STORE CONNECTION ID)
2
BROWSER ENTERS USER ID AND PASSWORD
S6
NG
ERROR
S9
CHECK USER ID/PASSWORD
OK
3
NG
S10
IS SERVICE ACCESSIBLE?
OK
NG
S11
CHECK DESIGNATION ID
OK
S12
CONVERSION PROCESS
·DESIGNATION URL (www.ggg.co.jp)
·REPRESENTATIVE ID/REPRESENTATIVE PASSWORD (GGG user1/passA)
4
·DESIGNATION URL (www.ggg.co.jp)
·REPRESENTATIVE ID/PASSWORD (GGGuser1/passA)
S13
TRANSMIT DATA (STORE CONNECTION ID)
S14
RECEIVE DATA (STORE CONNECTION ID)
S15
NG
CHECK REPRESENTATIVE ID/PASSWORD
OK
S16
PREPARE DATA
S17
COLLECT BILLING INFORMATION
TO FIG.3(B)

FIG.3

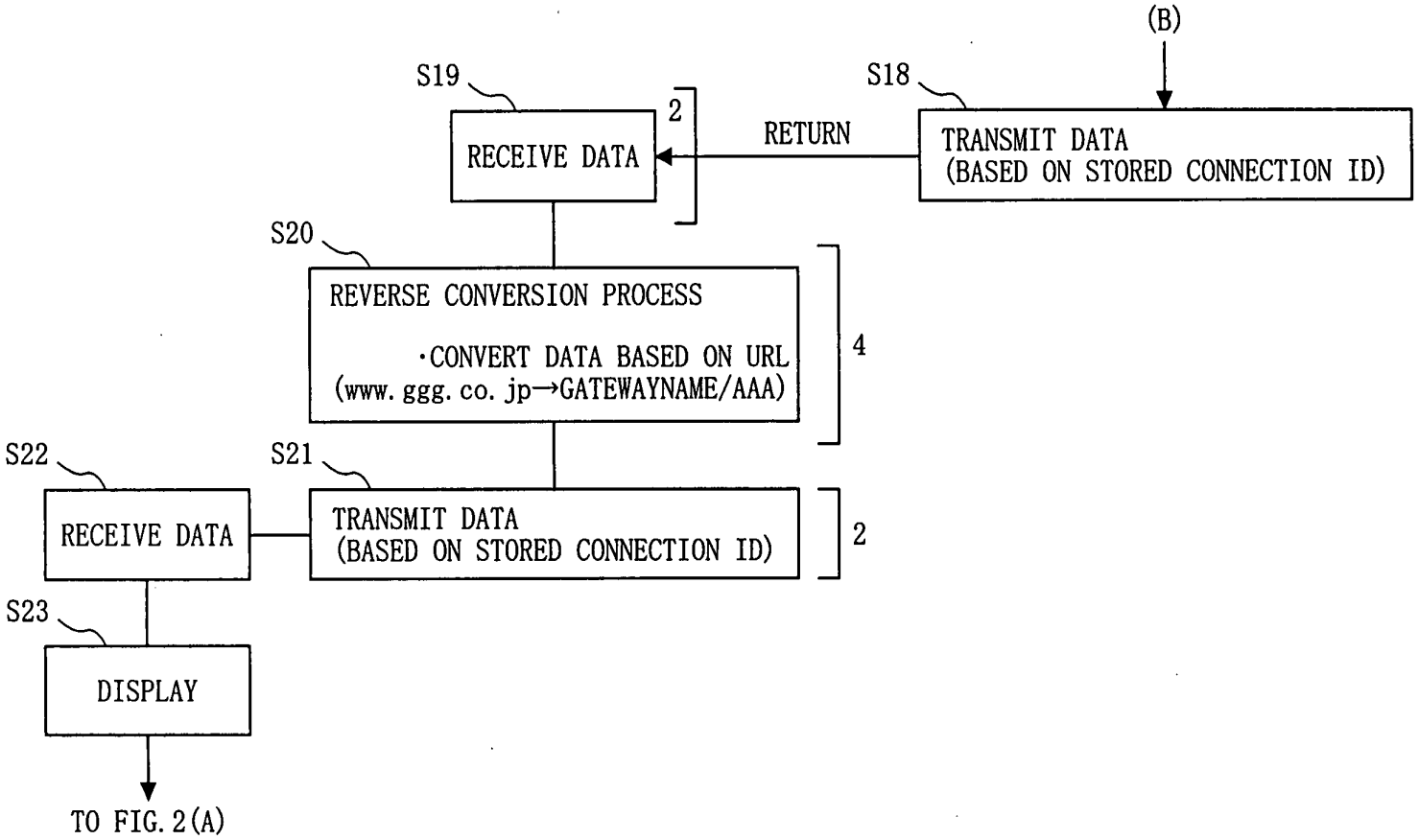

(B)
S19
S18
2
RECEIVE DATA
RETURN
TRANSMIT DATA
(BASED ON STORED CONNECTION ID)
S20
REVERSE CONVERSION PROCESS
·CONVERT DATA BASED ON URL
(www. ggg. co. jp→GATEWAYNAME/AAA)
4
S22
S21
RECEIVE DATA
TRANSMIT DATA
(BASED ON STORED CONNECTION ID)
2
S23
DISPLAY
TO FIG. 2(A)

FIG.4

(a)

AUTHENTICATION TABLE 5

	USER ID	PASSWORD	AUTHORIZED INFORMATION (DESIGNATION ID)	OPTION ID (ORGANIZATION ID, etc.)
① →	user1	pass1	AAA, BBB	
	user2	pass2	CCC	opt1
	⋮	⋮	⋮	⋮

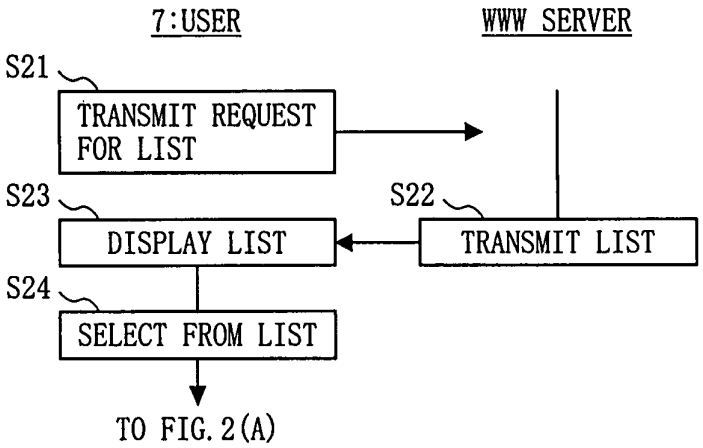
(b)

DESIGNATION CONVERSION TABLE 6

	DESIGNATION ID	DESIGNATION URL	REPRESENTATIVE ID	REPRESENTATIVE PASSWORD
② →	AAA	www.ggg.co.jp	GGG + USER ID + OPTION ID	passA
	BBB	www.fff.co.jp	FFF + USER ID + OPTION ID	passB
	CCC	www.hhh.co.jp	HHH + USER ID + OPTION ID	passC
③ →	FFF	www.fujitsu.co.jp		

FIG.5

(a)



(b)

EXAMPLE OF LIST 1 (DESIGNATION ID IS USED)

```
<A HREF=http://www.gateway.co.jp/AAA/>A SERVICE </A>
<A HREF=http://www.gateway.co.jp/BBB/>B SERVICE </B>
:
```

①

(c)

EXAMPLE OF LIST 2 (DESIGNATION ID IS NOT USED)

```
<A HREF=http://www.gateway.co.jp//www.ggg.co.jp/>A SERVICE </A>
<A HREF=http://www.gateway.co.jp//www.fff.co.jp/>B SERVICE </A>
:
```

②

FIG.6

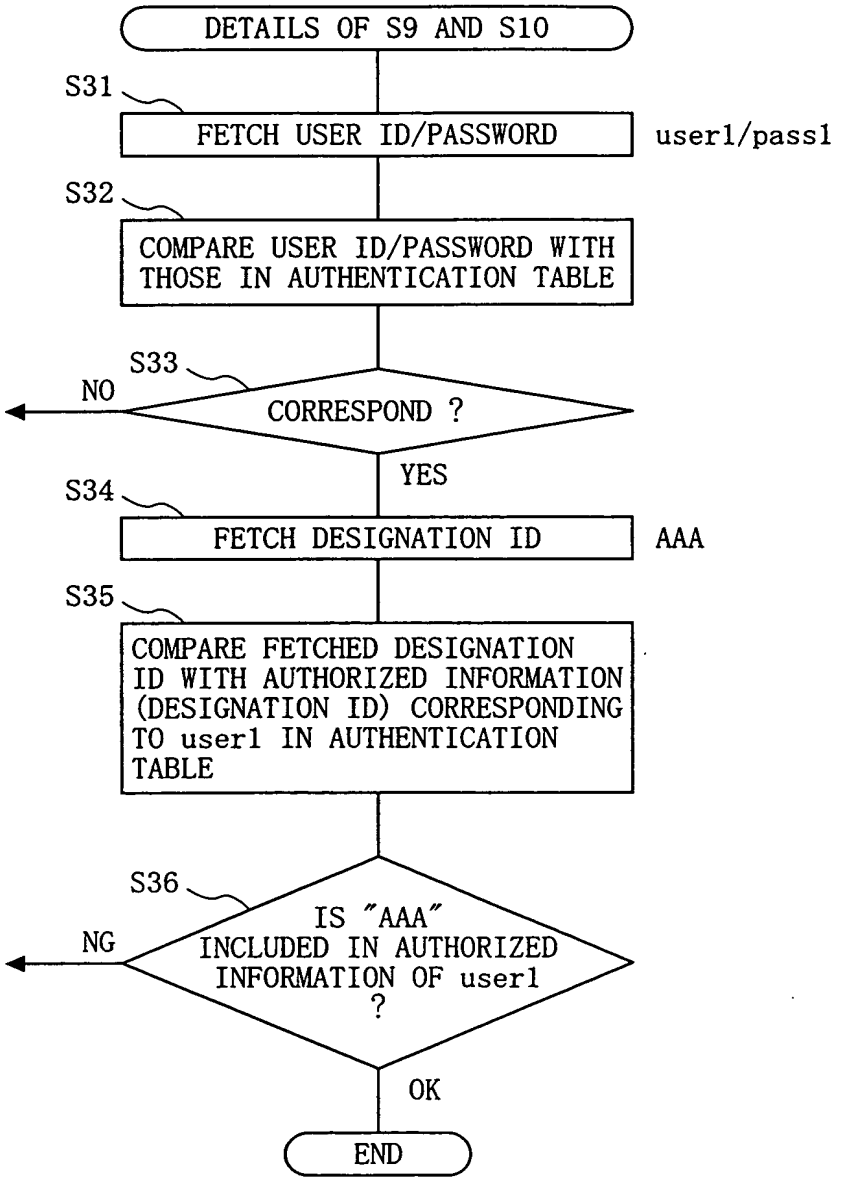

DETAILS OF S9 AND S10
S31
FETCH USER ID/PASSWORD
user1/pass1
S32
COMPARE USER ID/PASSWORD WITH THOSE IN AUTHENTICATION TABLE
S33
NO
CORRESPOND ?
YES
S34
FETCH DESIGNATION ID
AAA
S35
COMPARE FETCHED DESIGNATION ID WITH AUTHORIZED INFORMATION (DESIGNATION ID) CORRESPONDING TO user1 IN AUTHENTICATION TABLE
S36
NG
IS "AAA" INCLUDED IN AUTHORIZED INFORMATION OF user1 ?
OK
END

FIG.7

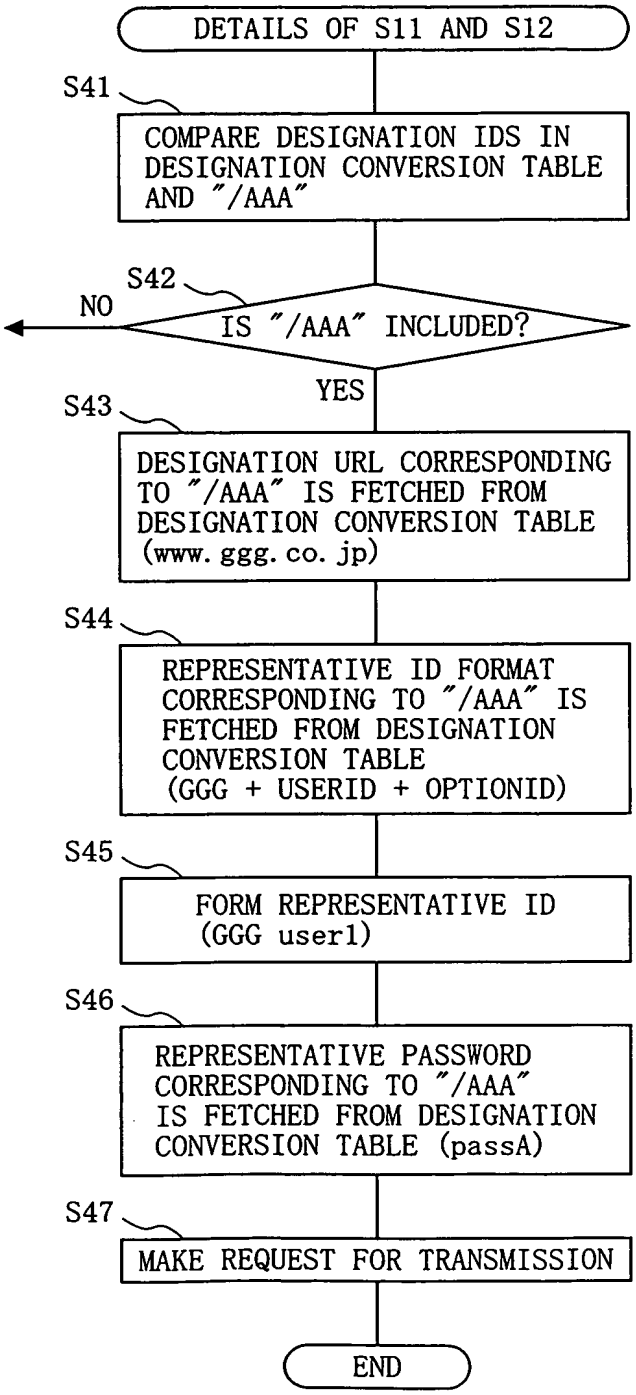

DETAILS OF S11 AND S12
S41
COMPARE DESIGNATION IDS IN DESIGNATION CONVERSION TABLE AND "/AAA"
S42
NO
IS "/AAA" INCLUDED?
YES
S43
DESIGNATION URL CORRESPONDING TO "/AAA" IS FETCHED FROM DESIGNATION CONVERSION TABLE (www.ggg.co.jp)
S44
REPRESENTATIVE ID FORMAT CORRESPONDING TO "/AAA" IS FETCHED FROM DESIGNATION CONVERSION TABLE (GGG + USERID + OPTIONID)
S45
FORM REPRESENTATIVE ID (GGG user1)
S46
REPRESENTATIVE PASSWORD CORRESPONDING TO "/AAA" IS FETCHED FROM DESIGNATION CONVERSION TABLE (passA)
S47
MAKE REQUEST FOR TRANSMISSION
END

FIG.8

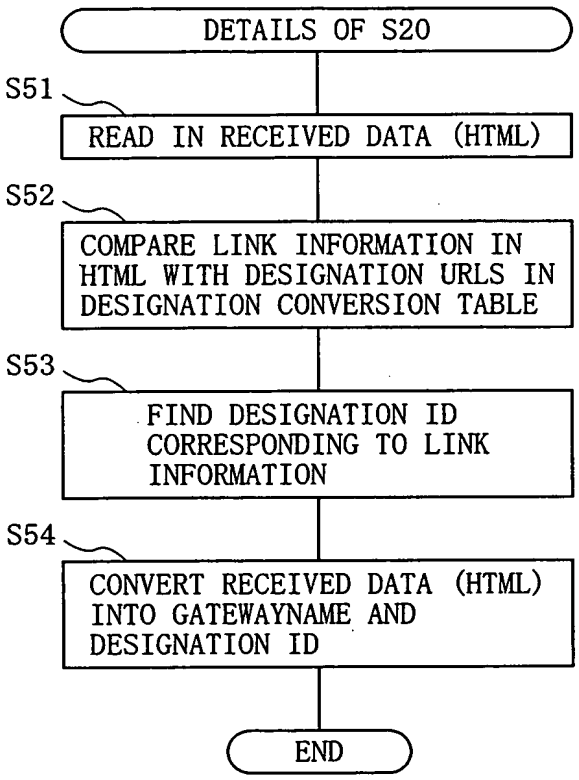

DETAILS OF S20
S51
READ IN RECEIVED DATA (HTML)
S52
COMPARE LINK INFORMATION IN HTML WITH DESIGNATION URLS IN DESIGNATION CONVERSION TABLE
S53
FIND DESIGNATION ID CORRESPONDING TO LINK INFORMATION
S54
CONVERT RECEIVED DATA (HTML) INTO GATEWAYNAME AND DESIGNATION ID
END

FIG.9

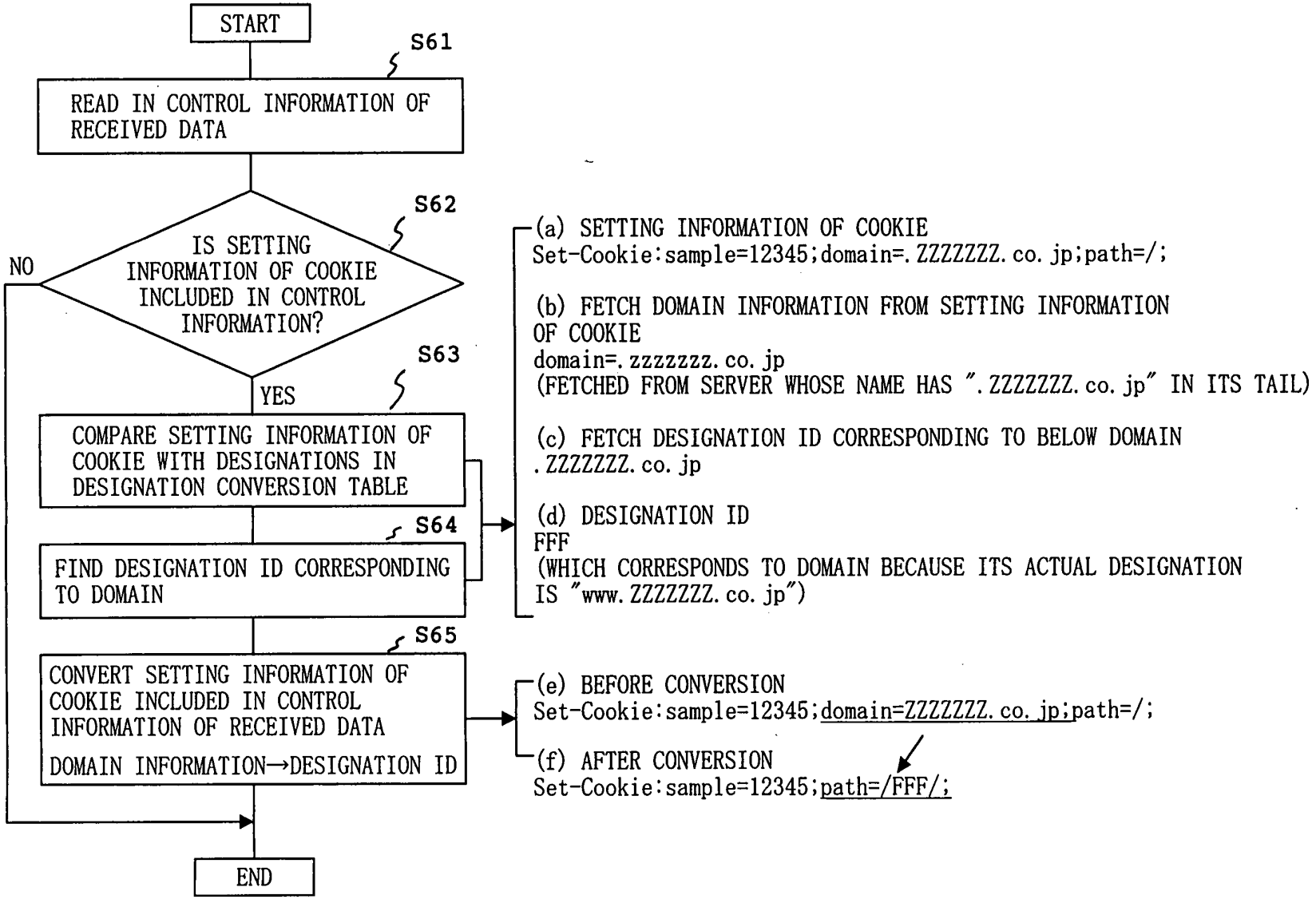
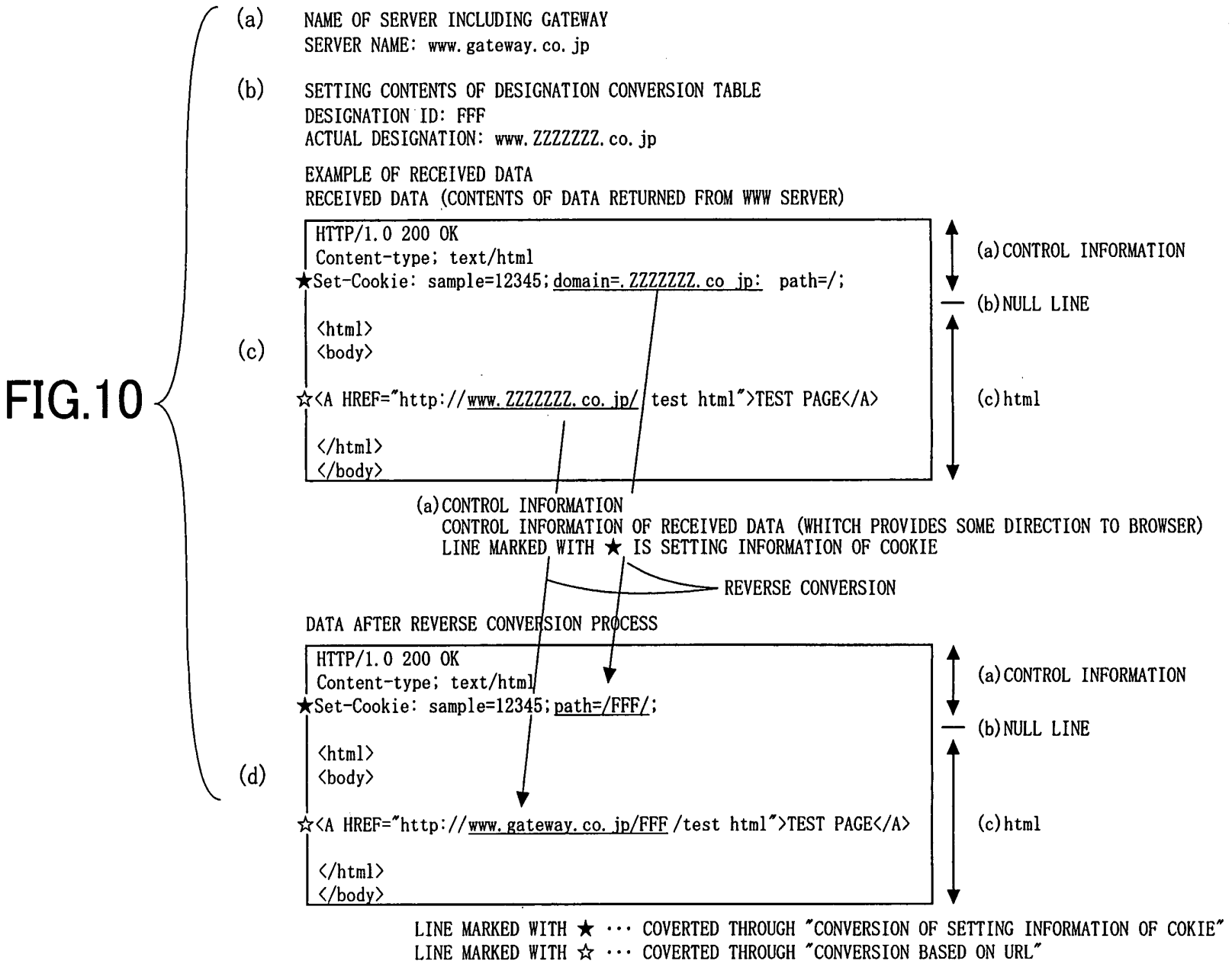

START
S61
READ IN CONTROL INFORMATION OF RECEIVED DATA
S62
IS SETTING INFORMATION OF COOKIE INCLUDED IN CONTROL INFORMATION?
NO
YES
S63
COMPARE SETTING INFORMATION OF COOKIE WITH DESIGNATIONS IN DESIGNATION CONVERSION TABLE
S64
FIND DESIGNATION ID CORRESPONDING TO DOMAIN
S65
CONVERT SETTING INFORMATION OF COOKIE INCLUDED IN CONTROL INFORMATION OF RECEIVED DATA
DOMAIN INFORMATION→DESIGNATION ID
END
(a) SETTING INFORMATION OF COOKIE
Set-Cookie:sample=12345;domain=.ZZZZZZZ.co.jp;path=/;
(b) FETCH DOMAIN INFORMATION FROM SETTING INFORMATION OF COOKIE
domain=.zzzzzzz.co.jp
(FETCHED FROM SERVER WHOSE NAME HAS ".ZZZZZZZ.co.jp" IN ITS TAIL)
(c) FETCH DESIGNATION ID CORRESPONDING TO BELOW DOMAIN
.ZZZZZZZ.co.jp
(d) DESIGNATION ID
FFF
(WHICH CORRESPONDS TO DOMAIN BECAUSE ITS ACTUAL DESIGNATION IS "www.ZZZZZZZ.co.jp")
(e) BEFORE CONVERSION
Set-Cookie:sample=12345;domain=ZZZZZZZ.co.jp;path=/;
(f) AFTER CONVERSION
Set-Cookie:sample=12345;path=/FFF/;

FIG.10


(a) NAME OF SERVER INCLUDING GATEWAY
SERVER NAME: www.gateway.co.jp
(b) SETTING CONTENTS OF DESIGNATION CONVERSION TABLE
DESIGNATION ID: FFF
ACTUAL DESIGNATION: www.ZZZZZZZ.co.jp
EXAMPLE OF RECEIVED DATA
RECEIVED DATA (CONTENTS OF DATA RETURNED FROM WWW SERVER)
HTTP/1.0 200 OK
Content-type; text/html
★Set-Cookie: sample=12345;domain=.ZZZZZZZ.co.jp; path=/;
(c)
<html>
<body>
☆<A HREF="http://www.ZZZZZZZ.co.jp/test html">TEST PAGE</A>
</html>
</body>
(a) CONTROL INFORMATION
(b) NULL LINE
(c) html
(a) CONTROL INFORMATION
CONTROL INFORMATION OF RECEIVED DATA (WHITCH PROVIDES SOME DIRECTION TO BROWSER)
LINE MARKED WITH ★ IS SETTING INFORMATION OF COOKIE
REVERSE CONVERSION
DATA AFTER REVERSE CONVERSION PROCESS
HTTP/1.0 200 OK
Content-type; text/html
★Set-Cookie: sample=12345;path=/FFF/;
(d)
<html>
<body>
☆<A HREF="http://www.gateway.co.jp/FFF/test html">TEST PAGE</A>
</html>
</body>
(a) CONTROL INFORMATION
(b) NULL LINE
(c) html
LINE MARKED WITH ★ ··· COVERTED THROUGH "CONVERSION OF SETTING INFORMATION OF COKIE"
LINE MARKED WITH ☆ ··· COVERTED THROUGH "CONVERSION BASED ON URL"